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## EUROPEAN PATENT APPLICATION

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54 Use of serotonin antagonists, particularly cyproheptadine, in the treatment of cancer, Alzheimer's disease, AIDS and multiple sclerosis.

57 The present invention relates to the use of serotonin antagonists and particularly cyproheptadine for treatment of patients suffering from cancer, acquired immuno deficiency syndrome, multiple sclerosis and Alzheimer's disease by administration of doses of about 0.5 to 4mg of said serotonin antagonists once a day during the evening.

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**PARTIAL EUROPEAN SEARCH REPORT**  
which under Rule 45 of the European Patent Convention  
shall be considered, for the purposes of subsequent  
proceedings, as the European search report

Application number  
**EP 86 11 1897**

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	CLIN. ENDOCRINOL., vol. 11, no. 3, September 1979, pages 323-331 B.L. WAJCHENBERG et al.: "Evaluation of resection of pituitary microadenoma for the treatment of Cushing's disease in patients with radiologically normal Sella Turcica" * Summary; page 326; discussion * --	1-7	A 61 K 31/445
X	BRITISH MEDICAL JOURNAL, vol. 285, no. 6340, 14th August 1982, page 475; A.L. HARRIS et al.: "Regression of carcinoid tumor with cyproheptadine" * Whole document * -- ./..	1-7	TECHNICAL FIELDS SEARCHED (Int. Cl.4)  A 61 K 31/00
<b>INCOMPLETE SEARCH</b>			
<p>The Search Division considers that the present European patent application does not comply with the provisions of the European Patent Convention to such an extent that it is not possible to carry out a meaningful search into the state of the art on the basis of some of the claims.</p> <p>Claims searched completely: 2 Claims searched incompletely: 1, 3-7 Claims not searched: Reason for the limitation of the search:</p> <p>Claims 5-7: Method for treatment of the human or animal body by surgery or therapy (See art. 52(4) of the European Patent Convention)</p> <p>Claims 1, 3-7: A compound cannot be described sufficiently by its pharmacological activity.</p>			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>07-06-1989</b>	Examiner <b>THEUNS</b>
<b>CATEGORY OF CITED DOCUMENTS</b>			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application, L : document cited for other reasons  & : member of the same patent family, corresponding document	

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## CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

## X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-7 partially: Use of a serotonin antagonist, e.g. cyproheptadine, for the manufacture of a medicament for the treatment of cancer;
2. Claims 1-7 partially: Use of a serotonin antagonist, e.g. cyproheptadine, for the manufacture of a medicament for the treatment of Alzheimer's disease;
3. Claims 1-7 partially: Use of a serotonin antagonist, e.g. cyproheptadine, for the manufacture of a medicament for the treatment of AIDS;
4. Claims 1-7 partially: Use of a serotonin antagonist, e.g. cyproheptadine, for the manufacture of a medicament for the treatment of multiple sclerosis.

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims,

namely claims: 1-7 partially



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DRUG INTELL. CLIN. PHARM., vol. 16, no. 12, December 1982, pages 962-965 J. JIMENEZ-ALONSO et al.: "Cyproheptadine-induced remission of Cushing's disease due to pituitary basophil adenoma"  * Whole document *	1-7	
X	CANCER CHEMOTHER. PHARMACOL., vol. 1, no. 4, 1978, pages 209-213, Springer-Verlag P.J.M. TUTTON et al.: "Evaluation of the cytotoxicity of dihydroxytryptamines and 5-hydroxytryptamine antagonists as cytotoxic agents in dimethylhydrazine-induced adenocarcinomata"  * Summary *	1-7	
X	BR. J. CANCER, vol. 36, no. 6, 1977, pages 814-817 D.H. BARKLA et al.: "Cytotoxicity of cyproheptadine and methysergide to chemically induced carcinomas of rat colon"  * Whole document *	1-7	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
X	ADV. INTERN. MED., vol. 25, 1980, pages 69-89, Year Book Medical Publishers, Inc. R. VIGNERI et al.: "Pharmacologic therapy of patients with pituitary tumors secreting prolactin, growth hormone and adrenocorticotropin"  * Pages 73,81 and 84-85 *	1-7	
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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	N.C. MED. J., vol. 30, no. 11, November 1969, pages 452-457 A.J. SIMPSON: "The carcinoid tumor, syndrome and spectrum. A review of the literature"  * Page 456 *	1-7	
A	J. CLIN. GASTROENTEROL. vol. 2, no. 4, December 1980, pages 349-354 I.M. MODLIN: "Carcinoid syndrome"  * Abstract *	1-7	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)